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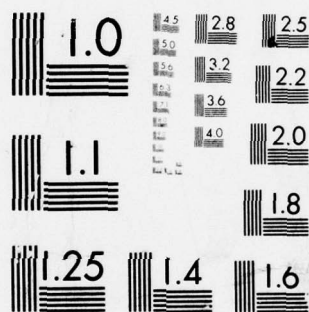
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**Review  
of  
Operational Readiness Float  
(ORF)  
Concept**



Department of the Army  
Office of the Deputy Chief of Staff for Logistics  
U. S. Army Logistics Evaluation Agency  
New Cumberland, Pennsylvania. 17070

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- a. Assist the DCSLOG in providing logistic master planning and guidance in the form of policies, principles, concepts, objectives, and priorities to all elements of the Army.
- b. Assist the DCSLOG in review and validation of logistic analyses by application of operations research and systems analysis (OR/SA) techniques.
- c. Assist the DCSLOG in the evaluation of the logistic portion of contingency plans.
- d. Assist the DCSLOG in developing HQDA logistic operating and management information systems.
- e. Plan for and assist the DCSLOG in providing central direction and control of the development and maintenance of the Army logistic system.
- f. Assist the DCSLOG in maintaining surveillance over logistic organizations and systems, Army-wide, to assure logistic readiness.
- g. Participate as the logistician in the materiel acquisition process.
- h. Assist the DCSLOG in the development and evaluation of the ILS program.



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1. The most effective criteria for selection of items to be provided ORF support.
2. The most effective criteria for establishment of program (wartime) and distribution (peacetime) requirements and authorized levels of ORF stockage for Active Army, Reserve and National Guard units.
3. Changes required to existing regulations to provide a viable ORF policy.

# ABSTRACT

## REVIEW OPERATIONAL READINESS FLOAT (ORF) CONCEPT

✓  
This paper  
reviews

As a result of General Accounting Office (GAO) and Army Audit Agency (AAA) reports, HQDA (DALO-SMZ-A) tasked the US Army Logistics Evaluation Agency (USALEA) to review ORF policy and update authorization criteria for Active Army, Reserve and National Guard units. The review encompasses all commodities except aircraft, medical and fixed communications-electronic equipment operated by the US Army Communications Command and/or US Army Security Agency. The specific objectives addressed herein are the determination of:

- ° The most effective criteria for selection of items to be provided ORF support.
- ° The most effective criteria for establishment of program (wartime) and distribution (peacetime) requirements and authorized levels of ORF stockage for Active Army, Reserve and National Guard units.
- ° Changes required to existing regulations to provide a viable ORF policy.

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CHAPTER 1  
INTRODUCTION

1-1. PROBLEM. To review operational readiness float (ORF) policy and validate or recommend changes to improve the management of ORF support.

1-2. ASSUMPTIONS.

a. Criteria for selection of items to be provided ORF support may vary by commodity type.

b. Criteria for ORF stockage may be different for wartime and peacetime and for CONUS and OCONUS commands.

c. Criteria for ORF requirements determination will be based on wartime use.

d. Funding constraints and difficulty in justifying budget requirements will continue in the coming years and perhaps become even more stringent.

1-3. FACTS BEARING ON THE PROBLEM.

a. AR 750-1, dated May 72, prescribes current ORF policies and procedures. A proposed revision is being staffed by letter, DALO-SMM-F, 14 April 1977, subject: AR 750-1, Army Materiel Maintenance Concepts and Policies.

b. Army Audit Agency (AAA) Report NE 76-214, 26 March 1976, subject: Maintenance Float and Direct Exchange (hereinafter referred to as the AAA report) contains findings and recommendations of audits performed during the period July 1974 to September 1975 at HQ, Department of the Army, USA Materiel Development and Readiness Command (DARCOM), USA Communications and Electronics Command (CERCOM), USA Depot System Command (DESCOM), USA Missile Materiel Readiness Command (MIRCOM), USA Tank-Automotive Materiel Readiness Command (TARCOM), and at units under the control of USA Forces Command (FORSCOM), USA Training and Doctrine Command (TRADOC), and US Army, Europe (USAREUR). The overall conclusions of the AAA pertaining to ORF were that:

(1) The policy concerning the criteria for selecting equipment and units to be supported by ORF needed reevaluation.

(2) Quantities of equipment established as required for ORF were inaccurate. Specific AAA recommendations are addressed in chapters 2 through 8.

c. General Accounting Office (GAO) Report, LCD-76-442, 5 April 1977, subject: Better Management of Spare Equipment Will Improve Maintenance Productivity and Save the Army Millions (hereinafter referred to as the GAO report) questions the need for about \$62 million of equipment for noncombat units and about \$23 million worth of tanks and automotive-type equipment for combat units. Specific GAO recommendations are addressed in chapters 2 through 8.

d. The Missile and Munitions Evaluation (MAME-74-75) report, April 1976, prepared by the US Army Missile and Munitions Center and School, portrays the worldwide status of missile and munitions logistical support in the areas of doctrine, organization, personnel, training and materiel, including positioning of ORF.

e. A Study to Determine the Cost Impact of Maintenance Float, April 1976, prepared by the US Army Materiel Maintenance Center, examines the role of ORF in terms of its contribution to materiel readiness of the Army-in-the-field. It identifies problem areas which inhibit float operation, determines the cost impact of the maintenance float system, and provides recommendations for system improvement and for more economical alternative procedures or systems.

f. An Ordnance Center and School, Maintenance Standards Study, December 1975, recommended the preparation of maintenance and repair parts consumption planning guides for contingency operations.

g. Draft DARCOM Regulation 702-( ), Product Assurance, Red Team/System Assessment Program, 1 June 1976, requires each commodity command to assess and evaluate the total performance of selected fielded systems.

h. Reserve Component units are required by the provisions of AR 220-1 to report their unit readiness on a semiannual basis.

i. Only the Class VII items listed in Appendix C, TM 38-750 for materiel readiness reporting are included in this review, excluding aircraft, medical materiel and fixed communication-electronic equipment operated and maintained by the US Army Communications Command and the Army Security Agency.

j. AR 11-11, 2 February 1976, subparagraph 2-1b(3), specifies that "Operational readiness float is authorized for procurement and distribution to CONUS installations for support of both Active and Army Reserve units stationed on or supported by these installations."

k. AR 71-3, 17 March 1975, prescribes the responsibilities and procedures for initiating, planning, programing, conducting and reporting user testing.

l. AR 220-1, 17 March 1975, establishes procedures for reporting combat readiness of units in the Army. A change is being implemented which will assign a Readiness Identification Code to each line item number in each TOE/MTOE.

m. AR 700-120, 14 March 1974, paragraph 2-5, specifies that "The Reserve Components are not authorized ORF until mobilized."

n. AR 710-2, 1 August 1971, chapter 7, prescribes supply performance objectives to be attained at unit, direct support and intermediate levels of supply.

o. AR 710-60, 1 March 1973, clarifies which factors should be used to compute ORF requirements when more than one commodity command uses the same equipment.

p. AR 750-37, 24 March 1971, prescribes the Army Sample Data Collection (SDC) Program.

q. AR 750-52, 20 September 1973, provides equipment operationally ready standards for selected Army weapon systems/equipments.

## CHAPTER 2

### ORF ITEM SELECTION CRITERIA

#### 2-1. DISCUSSION.

a. Selection of items for ORF is governed by criteria which assures optimization of materiel readiness within practicable cost limitations. AR 750-1 prescribes that items selected for ORF must be (1) mission essential; (2) maintenance significant; and, (3) authorized maintenance support on a repair and return to user basis, by maintenance activities below depot level, and above the organizational maintenance level. (See glossary.)

b. AR 220-1 prescribes the procedures for reporting combat readiness of Army units. It implements JCS Pub. 6, Vol II, Part 2, Chapter 1, Joint Reporting Structure, Force Status and Identity Report (FORSTAT). A number of subjective and statistical factors are specified to evaluate the unit's overall readiness. Significant among the factors is equipment on hand. The quantity indicated in the "Required Column" of a unit's MTOE is measured against the on-hand quantity, regardless of the authorized level of personnel and equipment. This influences the overall readiness of the unit. Thus, it is possible for a unit to have a low readiness condition (REDCON) even though the unit is not authorized sufficient equipment to attain a higher REDCON. Also, all reportable items carry the same weight for all reporting units regardless of their varying operational missions. In reality, an item which may be mission essential to one type of unit may not be to another.

c. A change in the method of designating equipment to be reported for readiness status has been initiated by DA. A review of the FORSTAT requirements revealed that the current method of designating essential equipment does not correlate to the primary operational mission of the unit, and that a method of assigning essentiality of an item in relation to the unit's mission was needed. To fulfill this need, the readiness identification code concept was developed. Every line item number (LIN) on a TOE/MTOE will be assigned a readiness identification code as follows:

<u>CODE</u>	<u>READINESS IDENTIFICATION</u>
A	Weapons and Equipment (PWE). A major item of equipment essential to and employed directly in accomplishment of the unit's primary operational mission.
B	Auxiliary Equipment (AE). Items of equipment which supplement PWE or take the place of PWE if it becomes inoperative. This term includes equipment other than PWE, but is of greater importance for the performance of the unit's primary operational mission than administrative support equipment.
C	Administrative Support Equipment (ASE). Items of equipment which are supportive of the unit's primary operational mission.

d. TRADOC tested the Readiness Identification Code concept at Ft. Carson, CO, in the Spring of 1976 by coding the LINs of nine different TOEs with the appropriate readiness identification codes. The results of using these codes as a source of unit readiness determination showed an improvement and merited



adoption, Army-wide. Subsequently, TRADOC was directed to annotate all TOEs/MTOEs with the new codes. The target date for completion of this action is January 1978.

e. The AAA report states that the Army could save approximately \$161 million in MIRCOM, CERCOM, and TARCOM by eliminating all equipment from the ORF other than RICC-1 items. This recommendation should be deferred pending implementation of the new readiness identification codes stated above. Upon implementation of this coding structure, ORF requirements should be computed and authorized only for those items of equipment with a readiness identification code of A in the unit's MTOE. Excess equipment generated by this change should be redistributed within each MACOM to fill shortages, or if not required in the MACOM, the excesses should be reported to the commodity manager for disposition.

## 2-2. CONCLUSIONS.

a. Readiness identification codes clarify the term "mission-essential" and subdivides TOE/MTOE lines into three categories.

b. The adoption of code A as the mission-essential criteria, will (1) limit ORF support to equipment employed directly to accomplish a unit's primary operational mission and (2) identify excess equipment which can be redistributed.

c. The limiting of ORF support to RICC-1 items, as recommended by AAA, does not consider the unit's primary operational mission. The use of code A overcomes this limitation.

## 2-3. RECOMMENDATIONS.

a. That a comparative analysis be made of the current mission-essential criteria versus RICC-1 and code A criteria after all TOEs/MTOEs have been annotated with readiness identification codes. The analysis should consider the effect on unit readiness, redistribution of excess ORF assets and procurement requirements.

b. That the implementation of the AAA recommendation be deferred pending the outcome of the above recommendation.

## CHAPTER 3

### ORF FOR GENERAL SUPPORT FORCES

#### 3-1. DISCUSSION.

a. The AAA reports that savings in excess of \$50 million would accrue by eliminating MIRCOM, CERCOM and TARCOM-managed ORF support to General Support Forces. (See glossary.) The AAA and GAO reports recommend elimination of ORF support to General Support Forces.

b. Elimination of ORF support to General Support Forces would reduce ORF requirements and result in cost savings without degrading the combat effectiveness of the Army. General Support Forces can often adjust their work programs and/or coordinate their equipment requirements to compensate for the elimination of currently authorized ORF support. General Support Forces units are usually collocated with other support and/or combat units. Equipment requirements for a deadlined item can often be obtained on a loan basis without degrading the readiness condition of the loaning unit. Due to the heavy training load at service schools, they may be unable to fulfill their ORF support requirements by the above procedures. In this event, the installation commander should have the option of providing ORF support if the item(s) are authorized to support a TOE STRAF unit. If a General Support Forces unit has a valid justification for ORF support that can not be met by the above procedures, the requirement should be forwarded to HQDA (DALO-SMD) for approval.

#### 3-2. CONCLUSIONS.

a. The deletion of General Support Force units from Army ORF requirements would not degrade Army combat readiness, but could degrade training conducted in service schools.

b. Cost savings would be realized by deleting General Support Forces from the Army ORF requirements.

c. HQDA (DALO-SMD) may authorize ORF support on an exception basis for General Support Force units that submit adequate justification.

#### 3-3. RECOMMENDATIONS.

a. That General Support Forces be excluded from the computation of ORF requirements.

b. That General Support Forces not be authorized an ORF without HQDA (DALO-SMD) approval, except that an installation commander may authorize ORF for a service school if an ORF is authorized to support TOE STRAF units at the installation.

c. That equipment generated as a result of the implementation of the above recommendations be redistributed to fill shortages.

d. That AR 750-1 be changed to incorporate these recommendations.

## CHAPTER 4

### USAR AND ARNG ORF REQUIREMENTS

#### 4-1. DISCUSSION.

a. AR 11-11 currently authorizes the procurement of ORF requirements for the Reserve Components, while AR 700-120 does not authorize its distribution until the Reserve Components are mobilized. If a Reserve Component unit has a valid peacetime justification for ORF support, HQDA (DALO-SMD) may authorize it on an exception basis.

b. The ORF project team prepared ORF questionnaires and participated in a joint data collection effort with the Improved Maintenance Support Among Army, ARNG, and USAR (Project Z60136) Team. From 5 May through 18 June 1976, 141 Active and Reserve Component activities were visited. The observations and findings of these visits and questionnaires are as follows:

(1) Reserve Components have a limited need for all of their authorized equipment, and hence, no real requirements for ORF. Their annual training requirement consists of 48 unit drills and 15 days of active duty training. With this limited usage and with other units collocated in the same geographical area, equipment is generally available for loan to units when their equipment is unserviceable.

(2) Many Reserve Component units store their equipment in equipment pools when they cannot store or utilize them at their home stations because of limited storage space, shortage of organizational mechanics and/or lack of training requirements. These equipment pools are located at unit training equipment sites (UTES), mobilization and training equipment sites (MATES), and equipment concentration sites (ECS).

(3) The distribution of ORF assets to the Reserve Components during peacetime would result in definite under-utilization of equipment. It would also require units to divert maintenance personnel to maintain the ORF.

#### 4-2. CONCLUSIONS.

a. The procurement of ORF requirements is necessary in peacetime to provide the ORF support that will be needed in the event of mobilization.

b. An ORF for the Reserve Components is generally not warranted in peacetime, considering the limited usage of on-hand equipment and equipment stored in equipment pools.

c. HQDA (DALO-SMD) should authorize ORF support on an exception basis to Reserve Component units that submit adequate justification.

#### 4-3. RECOMMENDATIONS.

a. ORF requirements continue to be procured for Reserve Component units.

b. ORF assets be issued to Reserve Component units normally only when mobilized.

c. The use of ORF by Reserve Component units during peacetime be approved by HQDA (DALO-SMD) on an exception basis when adequate justification is submitted. ORF requests for ARNG units should also be approved by the National Guard Bureau (NGB).

d. That AR 750-1 be changed to incorporate these recommendations.

## CHAPTER 5

### DATA NEEDED TO UPDATE ORF FACTORS

#### 5-1. DISCUSSION.

a. The Army's stated requirement for about \$553 million of ORF is the ORF needed to meet mobilization requirements. It is computed as prescribed in DCSRDA Procurement, Planning and Policy Guidance (PPPG), dated 1 December 1975. The US Army Research Development and Acquisition Information Systems Agency (RDAISA) computes these requirements by multiplying the ORF factors in SB 710-1-1 (which are wartime factors developed by the various commodity commands) by the initial issue quantity (IIQ) of the equipment in the total Army Force. These wartime factors should not be changed solely on the basis of peacetime ORF usage experience, since both the operational and maintenance environments in peacetime differ from those encountered in time of war in the following areas:

- Intensity of use of equipment.
- Attitudes toward use of ORF.
- Availability of resources.
- Priorities for the use of resources.

b. The principle behind utilizing a wartime factor is based on the requirement that the Army must be ready to mobilize on short notice. For this reason, the Army does not compute and utilize both wartime and peacetime ORF factors. If ORF requirements were based on peacetime factors, the Army would not have sufficient ORF available to meet mobilization requirements.

c. The Army has not updated its wartime ORF factors since 1971, as stated in the GAO report primarily because there is little need to do so every 2 years if the following procedure for determining wartime ORF factors for new items in paragraph 7-2 of AR 750-1 is followed:

"Selection of items to be supported by maintenance float. a. The number of line items to be authorized maintenance float support and the quantities of materiel used to provide such support, to include TMDE, will be held to a minimum.

b. The maintenance support concept included in materiel need or other qualitative requirements documents for new materiel and the maintenance support plan for such materiel will indicate whether or not maintenance float support is proposed for the item.

c. In making this determination, appropriate consideration will be given to such alternatives to maintenance float support as--

(1) The designation of modules subject to frequent failure as repair parts or items to be supported by the direct exchange program.

(2) The use of standby equipment authorizations to support critical systems with high availability requirements.

(3) The use of a maintenance support structure that provides for an organizational maintenance capability in selected using units/organizations to perform maintenance operations normally allotted to direct support maintenance activities.



d. Appropriate analytical techniques and simulations will be used in making the initial determination to provide maintenance float support and repeated thereafter during the materiel acquisition process to assure that this determination represents the most cost effective means of providing the requisite degree of materiel readiness of the system equipment.

e. The determination to provide maintenance float support for a system or equipment will be evaluated during the Expanded Service Test and subsequent operational tests and evaluations (AR 71-3) and will be documented, to include initial float factor and/or quantitative requirements computations, for approval as part of the type classification action required for the quantity procurement of the item for deployment."

d. All wartime ORF factors should be reviewed and updated when:

(1) A new item has been in the operational inventory for 2 years.

(2) The availability rates for the equipment, worldwide or specific major command, as reflected in DA level readiness reports for three reporting periods, show a deviation from the DA standard of 5 percent or more (see paragraph 1-3q, AR 750-52).

(3) A Maintenance and Repair Parts Consumption Planning Guide for Contingency Operations is prepared (see paragraph 1-3f, Maintenance Standards Study).

e. Data to review wartime ORF factors can be obtained from:

(1) Controlled Sample Data Collection (SDC) Programs as prescribed in AR 750-37 (paragraph 1-3p) which are generally initiated for new items of equipment.

(2) Red Team/System Assessment Programs that the DARCOM commodity commands conduct to assess and evaluate total performance of selected fielded systems.

f. ORF is identified as a separate item only in the Army Acquisition Objective (AAO) of the Army Materiel Plan (AMP) used to compute Army initial wartime requirements. The AAO consists of:

- Initial Issue Quantity (IIQ)
- Operational Readiness Float (ORF)
- Repair Cycle Float (RCF)
- Operational Projects
- Special Contingency
- Post D-Day Consumption

Budgetary limitations generally prevent the Army from procuring sufficient equipment to meet its authorized acquisition objectives (AAOs) in most items of equipment. DAIO-LEP's investigation revealed that the Army has an ORF of about \$200 million on hand, which is approximately 36 percent of its initial wartime requirement.

g. There is no audit trail for ORF items by which they can be traced from the initial wartime requirements in the AMP to the Major Item Distribution Plan (MIDP). Since the Army Supply System is a "pull" system, ORF is not issued unless requisitioned. When ORF requisitions are filled, theater commanders distribute assets as they see fit. Therefore, there is no way of

knowing the quantity of ORF assets unless the MACOMs are required to report this information. The MIDP makes bulk allocations of available assets to each MACOM. Each MACOM determines the exact number of these limited assets that will be used as ORF, using the following procedure prescribed in paragraph 7-17 of AR 750-1:

"Review and adjustment of levels. a. Operational readiness float assets will be reviewed annually at all levels of command to insure that assets are effectively used.

b. Major Army commands will make necessary internal adjustments to allocated operational readiness float assets by redistribution of float assets, taking into consideration demand and usage experience and changes in densities of equipment supported by maintenance units/activities assigned a direct support mission.

c. Major Army commands will submit recommendations to responsible national level materiel managers to adjust size of operational readiness float inventories when reviews indicate that such action is required to satisfy the 80 percent ORF availability standard."

h. Maintenance Management Center (MMC) Study, April 1976, "A Study to Determine the Cost Impact of Maintenance Floats," (paragraph 1-3e) recommended improving methods for assignment and management of float assets.

i. On 9 June 1976, DALO-LEP, DARCOM, and MMC representatives met and agreed that DARCOM would task MMC to initiate follow-on activities to their study with the following objectives:

(1) Identify major user command ORF usage reports and management methods.

(2) Recommend improvements, or standardization, of reports and management methods.

(3) Determine if standardized major command reports can be used by DA and DARCOM Commodity Commands for adjustment of peacetime and wartime ORF factors, and Army-wide control of float assets.

j. Appendix B contains the MMC report recommendation regarding the format for an "Operational Readiness Float (ORF) Status and Utilization Report" to be prepared annually by all MACOMs. It is similar to the current FORSCOM report.

k. On 7 September 1976, HQDA (DALO-SML) tasked DARCOM to complete a Repair Cycle Float (RCF) study by June 1977. The study includes evaluation of mathematical methods for the establishment of RCF and ORF factors, and a survey of user management of ORF; it may determine that changes should be made to the proposed "Operational Readiness Float Status and Utilization Report" contained in appendix B.

## 5-2. CONCLUSIONS.

a. The ORF factors in SB 710-1-1 (wartime factors developed by the respective commodity commands) and the methodology used to compute ORF mobilization requirements appear to be valid.

b. Compliance with regulatory guidelines for selecting items to be supported by ORF and the updating of ORF factors provide the primary means

to determine accurate and current ORF factors. Regulatory provisions are augmented by actions taken by some MACOMs to assist and influence the methodology for computing and refining ORF factors. However, updating ORF factors for items in the operational inventory every 2 years appears to be excessive for most items.

c. A standardized annual MACOM ORF Status and Utilization Report is needed to improve the management of ORF assets.

#### 5-3. RECOMMENDATIONS.

a. Continue the current methodology for computing ORF factors for new items and reviewing the factors at the end of 2 years.

b. Continue to publish ORF factors in SB 710-1-1.

c. Delete the requirement to review ORF factors every 2 years from AR 750-1 and substitute the following therefor:

"(1) Maintenance float factors initially established for new items or items that have been in the operational inventory for less than 2 years will be reviewed after the items have been deployed for a period of 2 years. Thereafter, these factors will be reviewed when:

(a) The availability rates for the equipment, worldwide or specific major command, as reflected in DA level materiel readiness reports for three reporting periods, show a deviation from the DA standard of 5 percent or more.

(b) A Maintenance and Repair Parts Consumption Planning Guide for Contingency Operations is prepared.

(2) Data to review ORF factors will be obtained from:

(a) Controlled Sample Data Collection (SDC) Programs as prescribed in AR 750-37 (paragraph G-2e) which are generally initiated for new items of equipment.

(b) Red Team/System Assessment Programs that DARCOM commodity commands conduct to assess and evaluate total performance of selected fielded systems."

d. If the RCF study, scheduled for completion in June 1977, interposes no objections, AR 750-1 be changed to require that the "ORF Status and Utilization Report" in appendix B be prepared annually for use by:

(1) MACOMs to manage their peacetime ORF assets.

(2) The respective commodity commands for use in editing ORF requisitions.

(3) HQDA (DALO-SMD) as a management tool in distributing assets.

## CHAPTER 6

### ADEQUACY OF ORF REQUIREMENTS IN REFLECTING REAL NEEDS AND NOT POOR SUPPLY AND MAINTENANCE PROCEDURES

#### 6-1. DISCUSSION.

a. A GAO report conclusion states: "The system operates to use float equipment as a substitute for, rather than a supplement to, a reasonable level of performance by the field maintenance units. As a result, inefficient maintenance and supply support are rewarded by extra float equipment."

b. If this is a valid conclusion, the practice is in violation of AR 750-1 which states: "ORF items will be issued to supported units to replace unserviceable economically repairable items which have a replacement issue priority of IPD (Issue Priority Designator) 1 through 8 and which cannot be repaired by support maintenance units/activities within the maximum repair time limits prescribed." The Army cannot afford extravagant stockage of ORF, but must exercise prudent management in its use at all times. It is also recognized that the Army cannot invest in large quantities of ORF equipment as a contingency against all supply and maintenance problems. The performance measures and objectives listed in the following paragraphs have been established to preclude this.

c. AR 710-2 prescribes supply performance measures and objectives to be attained at unit, direct support, and intermediate levels of supply for:

Customer support (demand accommodations, demand satisfactions, and fill rates); processing time (request/receipt); stockage list responsiveness (PLL size and ASL activity); assets (stock on hand, quick supply store zero balance, inventory accuracy, and inventory management measures); dues-in, dues-out (zero balance with dues-out, ASL dues-in over 180 days, non-ASL dues-in over 180 days, average shortage duration, average wait for fill, and high priority rate).

d. DA message, 301500Z Jul 76, Materiel Maintenance Performance Measures:

(1) Prescribes materiel maintenance performance measures and objectives for DSU/GSU (TOE & TDA) units and CONUS installations for materiel turnaround time (TAT), and staff-hour utilization index (SUI).

(2) States that action is being taken to define additional maintenance performance measures and related DA objectives where appropriate.

e. When maintenance and supply activities meet these above objectives, peacetime ORF stockage based on demands will more accurately reflect real needs.

f. On 1 September 1971, the Army amended MIL-M-63000C(TM) for Technical Manuals: General Requirements for Manuscripts. It requires that all new TMs published after that date incorporate work measurement time data for each maintenance task listed in the Maintenance Allocation Chart (MAC) for each level of maintenance. All new maintenance TMs, as well as revisions to existing manuals initiated for other reasons, will include work measurement time data in the MACs. Numerous TMs containing this information are in the field. Due to the magnitude of such a program, the Army does not have a



wholesale conversion program under way to provide for inclusion of this time data in the MAC in all existing TMs. However, the Army has established an accelerated program to provide for the development of time data on a group of selected items of equipment, such as the M109 Howitzer, M60A1 Tank, and other essential items. This work measurement time data will provide the maintenance managers with "standard staff-hours" to compute the efficiency rate.

g. As a precedent and indication of what can be done, the Aviation Systems Command (AVSCOM) has developed flat rate manuals for the following helicopters: AH-1G, OH-58A, CH-47A, and UH-1H. These manuals can be used to compute "standard staff-hours."

#### 6-2. CONCLUSIONS.

a. AR 750-1 should be revised to require that MACOMs insure that maintenance and supply activities meet the logistic objectives stated in the performance measures prescribed in chapter 7, AR 710-2, and the DA message cited in paragraph 6-1d, prior to requesting increased ORF authorizations.

b. Development of additional maintenance performance measures as indicated in cited DA message will contribute valuable data to bring management of ORF under control.

c. All TMs should include "standard staff-hours" for use in computing the efficiency rates (ERs) performance measurement. AVSCOM's flat-rate manuals for the AH-1G, OH-58A, CH-47A and UH-1H can be used as models for this purpose.

#### 6-3. RECOMMENDATIONS.

a. That AR 750-1 be revised to require that MACOMs insure that their maintenance and supply activities meet the logistic objectives stated in the performance measures prescribed in chapter 7, AR 710-2, and DA message 301500Z Jul 76, prior to approving increased ORF authorizations.

b. That action to develop the additional performance measures as indicated in paragraph 6-1d(2) be initiated.

c. That all TMs not containing "standard staff-hours" be rewritten expeditiously to include them for use in computing efficiency rates (ERs).

## CHAPTER 7

### LOCATION(S) OF ORF STOCKAGE IN CONUS AND OCONUS

#### 7-1. DISCUSSION.

a. Although location(s) of ORF stocks is stated as policy in AR 750-1 (para 7-6c), there is allowance for flexibility under varying circumstances. Even so, the policy is subject to reexamination. This discussion will develop logic to seek the optimal location(s) for ORF stocks.

b. The Missile and Munitions Evaluation Study, conducted by the US Army Missile & Munitions Center & School in April 1976, indicated there was wide variation in the location of missile ORF. In CONUS, the HAWK and NIKE HERCULES units had no appreciable ORF assets. The CHAPARRAL/VULCAN units were variable in the number of systems on hand at the DS level; and at some installations the float was located and maintained by the installation's post maintenance function. In Alaska, the NIKE HERCULES ORF was located at the DS/GS company. DS units frequently experience problems in obtaining supply and maintenance support of the nonmissile components of the ORF. An example of this is related to the automotive portions; i.e., tracks, drive trains and engines for the CHAPARRAL and VULCAN self-propelled vehicles. In OCONUS areas, the location of the missile ORF varied. In Korea, all ORF was located at the DS unit levels for all systems. In Europe, the HAWK ORF was located entirely at the DS level; the NIKE HERCULES ORF was split, with system major items as CS and smaller items at DS; the CHAPARRAL/VULCAN ORF was exclusively at the DS level.

c. The following observations were obtained from the ORF questionnaires and discussions with representatives of DA and USAREUR staffs:

(1) When the ORF is located at DS level, some organizations experience the following problems:

(a) There is a tendency not to issue ORF as property book transaction, because the outstanding job orders and parts requisitions for tactical item being exchanged must be canceled and resubmitted, often with a lower priority.

(b) The additional ORF maintenance workload must be performed without commensurate resources, chiefly manpower.

(c) Possession of the ORF inhibits mobility due to lack of prime movers. This problem particularly affects DS units which are required to be 100 percent mobile.

(d) When ORFs are located in forward support units, there is a tendency for them to be abused and misutilized (e.g., subassemblies removed, parts cannibalized).

(e) Because of the above cited problems, the ORF is not always maintained at the level that is necessary to keep it operational.

(2) In contrast to the problems at the DS level, there do not appear to be as many problems when the ORF is positioned at the GS level. Some of the advantages cited were as follows:

(a) Manpower for maintenance support of the ORF is generally available.

(b) Quality assurance/quality control is more intensively managed.

(c) Mobility considerations are not a major problem.

(d) The potential for misutilization is low.

(e) A centralized point is established for the control, issue and support of a large portion of the theater ORF.

(3) The positioning of the ORF at installation level appears to be the most satisfactory location in CONUS. However, at installations which support a division(s), there are advantages in positioning the ORF at the division DSU. In cases where requests can be justified on an exception basis, AR 750-1 should be changed to allow the MACOM commander to authorize positioning the ORF at the division DSU.

(4) AR 700-120 authorizes ORF for overseas units to be computed against the required columns of the MTOE/TDA of supported units. If the theater commander requisitions and receives this ORF, he should be authorized to place the ORF that is not demand supported in peacetime at GSU or war reserve sites.

#### 7-2. CONCLUSIONS.

a. In CONUS, the ORF should be located at the installation level, except in those cases which can be justified to the MACOM commander to position it at the division DSU level.

b. In OCONUS, the demand supported ORF should normally be positioned at the GS level for enhanced control and improved support. Selected items should be justified, on an exception basis, to the theater commander to be positioned at the DSU level.

c. The theater commander should also be authorized to position nondemand supported ORF at either GSU or war reserve sites.

#### 7-3. RECOMMENDATIONS. AR 750-1 be changed to permit:

a. ORF to be positioned at CONUS division DSU sites in those cases where the action can be justified to, and approved by the MACOM commander.

b. OCONUS ORF be positioned at DSU, GSU or war reserve sites at the discretion of the theater commander.

CHAPTER 8  
ADEQUACY OF DA ORF GUIDANCE

8-1. DISCUSSION.

a. ARs 11-11 and 700-120 contain conflicting and incomplete statements regarding the authorization of ORF support for Reserve Component units.

b. Paragraph 2-1b(3), AR 11-11, states:

"Operational readiness float is authorized for procurement and distribution to--

(a) CONUS installations for the support of both Active Army and Army Reserve units stationed on or supported by these installations.

(b) US property and fiscal officers of the several State entities for support of the Army National Guard while in an inactive (nonmobilized) status."

c. Paragraph 2-5, AR 700-120, states in part:

"The Reserve components are not authorized ORF until mobilized. ORF for aircraft and aircraft related items will be computed against the Required column of MOTE for all commands, Active and Reserve."

d. Message, DAMO-RQD, 231845Z Apr 76, subject: FY 78 POM Aircraft IIQS/AAOs and ORF, RCF, PTRF Rates, states in part:

"ORF and RCF will be applied to all active and reserve component TOE units."

e. The above statement (para 8-1d) is not reflected in ARs 11-11 and 700-120.

f. The proposed revision of AR 750-1 (para 1-3a) would be improved by the inclusion of the changes recommended in chapters 3, 4, 5, 6, and 7 of this review.

8-2. CONCLUSIONS.

a. Conflicting and incomplete statements in ARs 11-11 and 700-120, regarding the authorization of ORF support for Reserve Component units, should be corrected.

b. The proposed revision of AR 750-1 should include the changes recommended in chapters 3, 4, 5, 6, and 7 of this review.

8-3. RECOMMENDATIONS.

a. Revise AR 11-11, paragraph 2-1b(3), to read:

"Operational readiness float is authorized for procurement and distribution to--

(a) CONUS installations for the support of both Active Army and Army Reserve units (aircraft and aircraft related items only) stationed on or supported by these installations.



(b) US property and fiscal officers of the several State entities for support of the Army National Guard while in an inactive (nonmobilized) status (aircraft and aircraft related items only)."

b. Revise AR 700-120, paragraph 2-5, to read:

"The Reserve Components are not authorized ORF support until mobilized (except for aircraft and aircraft related items). ORF for aircraft and aircraft related items will be computed against the Required column of MTOE for all commands, Active and Reserve."

c. The proposed revision of AR 750-1 includes the changes recommended in chapters 3, 4, 5, 6, and 7 of this review.

## CHAPTER 9

### CONSOLIDATED CONCLUSIONS AND RECOMMENDATIONS

9-1. GENERAL. This chapter contains a consolidation of the conclusions and recommendations reached in chapters 2 through 8.

#### 9-2. ORF ITEM SELECTION CRITERIA (CHAPTER 2).

##### a. Conclusions.

(1) Readiness identification codes clarify the term "mission-essential" and subdivides TOE/MTOE lines into three categories.

(2) The adoption of code A as the mission-essential criteria, will (a) limit ORF support to equipment employed directly to accomplish a unit's primary operational mission and (b) identify excess equipment which can be redistributed.

(3) The limiting of ORF support to RICC-1 items, as recommended by AAA, does not consider the unit's primary operational mission. The use of code A overcomes this limitation.

##### b. Recommendations.

(1) That a comparative analysis be made of the current mission-essential criteria versus RICC-1 and code A criteria after all TOEs/MTOEs have been annotated with readiness identification codes. The analysis should consider the effect on unit readiness, redistribution of excess ORF assets and procurement requirements.

(2) That the implementation of the AAA recommendation be deferred pending the outcome of the above recommendation.

#### 9-3. ORF FOR GENERAL SUPPORT FORCES (CHAPTER 3).

##### a. Conclusions.

(1) The deletion of General Support Force units from Army ORF requirements would not degrade Army combat readiness, but could degrade training conducted in service schools.

(2) Cost savings would be realized by deleting General Support Forces from the Army ORF requirements.

(3) HQDA (DALO-SMD) may authorize ORF support on an exception basis for General Support Force units that submit adequate justification.

##### b. Recommendations.

(1) That General Support Forces be excluded from the computation of ORF requirements.

(2) That General Support Forces not be authorized an ORF without HQDA (DALO-SMD) approval, except that an installation commander may authorize ORF for a service school if an ORF is authorized to support TOE STRAF units at the installation.

(3) That equipment generated as a result of the implementation of the above recommendations be redistributed to fill shortages.

(4) That AR 750-1 be changed to incorporate these recommendations.

#### 9-4. USAR AND ARNG ORF REQUIREMENTS (CHAPTER 4).

##### a. Conclusions.

(1) The procurement of ORF requirements is necessary in peacetime to provide the ORF support that will be needed in the event of mobilization.

(2) An ORF for the Reserve Components is generally not warranted in peacetime, considering the limited usage of on-hand equipment and equipment stored in equipment pools.

(3) HQDA (DALO-SMD) should authorize ORF support on an exception basis to Reserve Component units that submit adequate justification.

##### b. Recommendations.

(1) ORF requirements continue to be procured for Reserve Component units.

(2) ORF assets be issued to Reserve Component units normally only when mobilized.

(3) The use of ORF by Reserve Component units during peacetime be approved by HQDA (DALO-SMD) on an exception basis when adequate justification is submitted. ORF requests for ARNG units should also be approved by the National Guard Bureau (NGB).

(4) That AR 750-1 be changed to incorporate these recommendations.

#### 9-5. DATA NEEDED TO UPDATE ORF FACTORS (CHAPTER 5).

##### a. Conclusions.

(1) The ORF factors in SB 710-1-1 (wartime factors developed by the respective commodity commands) and the methodology used to compute ORF mobilization requirements appear to be valid.

(2) Compliance with regulatory guidelines for selecting items to be supported by ORF and the updating of ORF factors provide the primary means to determine accurate and current ORF factors. Regulatory provisions are augmented by actions taken by some MACOMs to assist and influence the methodology for computing and refining ORF factors. However, updating ORF factors for items in the operational inventory every 2 years appears to be excessive for most items.

(3) A standardized annual MACOM ORF Status and Utilization Report is needed to improve the management of ORF assets.

##### b. Recommendations.

(1) Continue the current methodology for computing ORF factors for new items and reviewing the factors at the end of 2 years.

(2) Continue to publish ORF factors in SB 710-1-1.

(3) Delete the requirement to review ORF factors every 2 years from AR 750-1 and substitute the following therefor:

"(a) Maintenance float factors initially established for new items or items that have been in the operational inventory for less than 2 years will be reviewed after the items have been deployed for a period of 2 years. Thereafter, these factors will be reviewed when:

1 The availability rates for the equipment, worldwide or specific major command, as reflected in DA level materiel readiness reports for three reporting periods, show a deviation from the DA standard of 5 percent or more.

2 A Maintenance and Repair Parts Consumption Planning Guide for Contingency Operations is prepared.

(b) Data to review ORF factors will be obtained from:

1 Controlled Sample Data Collection (SDC) Programs as prescribed in AR 750-37 (paragraph G-2g) which are generally initiated for new items of equipment.

2 Red Team/System Assessment Programs that DARCOM commodity commands conduct to assess and evaluate total performance of selected fielded systems."

(4) If the RCF study, scheduled for completion in June 1977, interposes no objections, AR 750-1 be changed to require that the "ORF Status and Utilization Report" in appendix B be prepared annually for use by:

(a) MACOMs to manage their peacetime ORF assets.

(b) The respective commodity commands for use in editing ORF requisitions.

(c) HQDA (DALO-SMD) as a management tool in distributing assets.

9-6. ADEQUACY OF ORF REQUIREMENT IN REFLECTING REAL NEEDS AND NOT POOR SUPPLY AND MAINTENANCE PROCEDURES (CHAPTER 6).

a. Conclusions.

(1) AR 750-1 should be revised to require that MACOMs insure that maintenance and supply activities meet the logistic objectives stated in the performance measures prescribed in chapter 7, AR 710-2, and the DA message cited in paragraph 6-1d, prior to requesting increased ORF authorizations.

(2) Development of additional maintenance performance measures as indicated in cited DA message will contribute valuable data to bring management of ORF under control.

(3) All TMs should include "standard staff-hours" for use in computing the efficiency rates (ERs) performance measurement. AVSCOM's flat-rate manuals for the AH-1G, OH-58A, CH-47A and UH-1H can be used as models for this purpose.



b. Recommendations.

(1) That AR 750-1 be revised to require that MACOMs insure that their maintenance and supply activities meet the logistic objectives stated in the performance measures prescribed in chapter 7, AR 710-2, and DA message 301500Z Jul 76, prior to approving increased ORF authorizations.

(2) That action to develop the additional performance measures as indicated in paragraph 6-1d(2) be initiated.

(3) That all TMs not containing "standard staff-hours" be rewritten expeditiously to include them for use in computing efficiency rates (ERs).

9-7. LOCATION(S) OF ORF STOCKAGE IN CONUS AND OCONUS (CHAPTER 7).

a. Conclusions.

(1) In CONUS, the ORF should be located at the installation level, except in those cases which can be justified to the MACOM commander to position it at the division DSU level.

(2) In OCONUS, the demand supported ORF should normally be positioned at the GS level for enhanced control and improved support. Selected items should be justified, on an exception basis, to the theater commander to be positioned at the DSU level.

(3) The theater commander should also be authorized to position non-demand supported ORF at either GSU or war reserve sites.

b. Recommendations. AR 750-1 be changed to permit:

(1) ORF to be positioned at CONUS division DSU sites in those cases where the action can be justified to, and approved by the MACOM commander.

(2) OCONUS ORF be positioned at DSU, GSU or war reserve sites at the discretion of the theater commander.

9-8. ADEQUACY OF DA ORF GUIDANCE (CHAPTER 8).

a. Conclusions.

(1) Conflicting and incomplete statements in ARs 11-11 and 700-120, regarding the authorization of ORF support for Reserve Component units, should be corrected.

(2) The proposed revision of AR 750-1 should include the changes recommended in chapters 3, 4, 5, 6, and 7 of this review.

b. Recommendations.

(1) Revise AR 11-11, paragraph 2-1b(3), to read:

"Operational readiness float is authorized for procurement and distribution to--

(a) CONUS installations for the support of both Active Army and Army Reserve units (aircraft and aircraft related items only) stationed on or supported by these installations.

(b) US property and fiscal officers of the several State entities for support of the Army National Guard while in an inactive (nonmobilized) status (aircraft and aircraft related items only)."

(2) Revise AR 700-120, paragraph 2-5, to read:

"The Reserve Components are not authorized ORF support until mobilized (except for aircraft and aircraft related items). ORF for aircraft and aircraft related items will be computed against the Required column of MTOE for all commands, Active and Reserve."

(3) The proposed revision of AR 750-1 includes the changes recommended in chapters 3, 4, 5, 6, and 7 of this review.

## APPENDIX A

### CONSOLIDATED DCSLOG TASKING DIRECTIVE TO USALEA

1. TITLE: Review Operational Readiness Float Concept.
2. Project Identification Number: Z60144.
3. PURPOSE: To review operational readiness float policy and validate authorization criteria for Active Army, Reserve and National Guard units.
4. LOGMAP OBJECTIVE: Improve the Maintenance Management Policy of Army materiel.
5. BACKGROUND/DESCRIPTION:
  - a. References.
    - (1) CSM 74-5-73, Resources for a 16 Division Active Army (Project 16-78), 13 Aug 1974 (S).
    - (2) Task Directive (Project 16-78 (Resources for a 16 Division Active Army)) DCSLOG, HQDA, 27 Aug 1974 (FOUO).
    - (3) AF 5-5, The Army Study System.
    - (4) AR 220-1, Unit Readiness Reporting.
    - (5) AR 700-120, Materiel Distribution Management.
    - (6) AR 710-2, Materiel Management for Using Units, Support Units and Installations.
    - (7) AR 750-1, Army Materiel Maintenance Concepts and Policies.
    - (8) AR 750-52, Equipment Operationally Ready Standards.
    - (9) TM 38-750, The Army Maintenance Management System (TAMMS).
    - (10) USAAA Audit Report NE 76-214, 26 March 1976, "Maintenance Float and Direct Exchange."
    - (11) Draft GAO Report, 947216-LDC-76-442 (MM-195), 10 Sep 76, "Spare Equipment at Army Maintenance Activities to Maintain Operational Readiness."
  - b. Sponsor. Deputy Chief of Staff for Logistics, Headquarters, Department of the Army.
  - c. Study Agency. US Army Logistics Evaluation Agency will conduct the study according to guidance contained herein or modified in process by the study sponsor.
  - d. Courses of Action/Technical Approaches.
    - (1) Problem. To review operational readiness float policy and validate or recommend changes to policy to improve the management of operational readiness float support.
    - (2) Objective. To determine -
      - (a) Effective criteria for the selection of items and units to be provided operational readiness float support.
      - (b) Procedures for computing valid requirements for operational readiness float.

APPENDIX A (Cont)

(3) Scope. The project will evaluate (a) current policy and procedures relative to selection criteria for items and units to be provided operational readiness float support and the computation of operational readiness float requirements; (b) GAO and USAAA proposals with respect to these policies and procedures; and develop new or recommended changes in policies and procedures to improve the management of operational readiness float support.

(4) Time Frame. 1976-1981.

(5) Limits.

(a) Only selected Class VII items listed in Appendix C, TM 38-750 for Materiel Readiness reporting will be included in the study.

(b) Fixed communication - electronic equipment operated and maintained by the US Army - Communications Command and the Army Security Agency; Army Aircraft, and Medical Materiel will be excluded from the study.

(c) Peacetime float usage will not be the sole basis for establishing criteria.

(6) Assumptions.

(a) End items will be available for stockage in the quantities required as determined by the study.

(b) Criteria for selection may vary by commodity type.

(c) Criteria for stockage may vary among CONUS and OCONUS commands.

(d) Criteria for stockage will be based on wartime use.

(7) Essential Elements of Analysis.

(a) What changes are needed in the criteria for the selection of items to be provided ORF support to insure adequate consideration of the impact of such support on equipment readiness?

(b) Should operational readiness float support for General Support forces be reduced or eliminated? If yes, identify units for reduction or deletion.

(c) Is operational readiness float required for support of USAR and NG units? If yes, at what level?

(d) Are equipment operationally ready standards in AR 750-52 adequate?

(e) What type data is needed for the computation and periodic update of valid wartime ORF requirements, and what is its availability? How can availability be improved?

(f) What changes are needed in procedures for computing ORF requirements to insure that these requirements reflect real needs and are not a substitute for good supply and maintenance practices?

(g) At what level should operational readiness float be stocked in CONUS and OCONUS commands?

(h) Is current Department of the Army guidance for maintenance float policy adequate? If not, what changes are required?



6. ADMINISTRATIVE DETAILS.

- a. Required date. The evaluation of GAO proposals (ref para 5a(11)) will be completed by 18 October 1976.
- b. USALEA will use its existing capabilities and resources in accomplishing the evaluation.
- c. The Directorate for Supply and Maintenance, ODCSLOG, HQDA, is the proponent for this evaluation. All correspondence between USALEA and the proponent will be routed through Field Services Branch.
- d. Direct coordination with all major commands; e.g., HQ USAREUR, FORSCOM, AMC, etc., is authorized.
- e. USALEA will prepare a study plan to include a milestone schedule within 30 days of date of this directive for approval by the study sponsor.
- f. Progress reports will be submitted monthly after approval of the study plan.
- g. Final draft report will be submitted to the project proponent NLT 1 Nov 76.

# APPENDIX A (Cont)

<b>DISPOSITION FORM</b>			
For use of this form, see AR 340-15, the proponent agency is TAGCEN.			
REFERENCE OR OFFICE SYMBOL	SUBJECT		
DALO-SMM-F	Review Operational Readiness Float Concept (Project LEAP, Issue #153)		
THRU: D/LPOS	FROM: DALO-SMZ	DATE: 29 Jan 1976	CMT 1
TO: CDR, LEA		LTC Burke/ff/71343	
Request you take action to complete the project described below:			
1. TITLE: Review Operational Readiness Float Concept.			
2. Project Identification Number: Project LEAP, Issue #153.			
3. PURPOSE: To identify resource savings - men, money, and materiel - to aid in streamlining the US Army logistic system and improve readiness.			
4. LOCMAP Objective: Improve the Maintenance Management Policy of Army materiel.			
5. Background/Description:			
a. References:			
(1) CSM 74-5-73, Resources for a 16 Division Active Army (Project 16-78), 13 Aug 1974 (S).			
(2) Task Directive (Project 16-78 (Resources for a 16 Division Active Army)) DCSLOG, HQDA, 27 Aug 1974 (FOUO).			
(3) AR 5-5, The Army Study System.			
(4) AR 220-1, Unit Readiness Reporting.			
(5) AR 700-120, Materiel Distribution Management.			
(6) AR 710-2, Materiel Management for Using Units, Support Units and Installations.			
(7) AR 750-1, Army Materiel Maintenance Concepts and Policies.			
(8) AR 750-52, Equipment Operationally Ready Standards.			
(9) TM 38-750, The Army Maintenance Management System (TAMMS).			
b. SPONSOR: Deputy Chief of Staff for Logistics, Headquarters, Department of the Army.			
c. STUDY AGENCY: US Army Logistics Evaluation Agency will conduct the study according to guidance contained herein or modified in process by the study sponsor.			

DA FORM 2496  
1 FEB 62

REPLACES DD FORM 96, WHICH IS OBSOLETE.

☆ GPO - 1975 - 665 422/1063

APPENDIX A (Cont)

DALO-SMM-F

29 Jan 1976

SUBJECT: Review Operational Readiness Float Concept (Project LEAP, Issue #153)

d. Courses of Action/Technical Approaches.

(1) PROBLEM: To review operational readiness float policy and validate authorization criteria.

(2) OBJECTIVE: To determine the most effective criteria for:

(a) Selection of items to be provided operational readiness float support.

(b) Establishment of levels of operational readiness float stockage by Active Army, Reserve, and National Guard units.

(3) SCOPE: The study will evaluate criteria for (a) selection of end items for operational readiness float support and (b) establishment of operational readiness float levels; determine the manpower and materiel costs of current programs; and develop criteria for item selection and stockage based on equipment reliability which will assure operational readiness of Army units in the most economical manner.

(4) TIME FRAME: 1976-1981

(5) LIMITS:

(a) Only selected Class VII items listed in Appendix C, TM 38-750 for Materiel Readiness reporting will be included in the study.

(b) Fixed communications - electronic equipment operated and maintained by the US Army Communications Command and the Army Security Agency, as well as medical materiel, will be excluded from the study.

(c) Peacetime float usage will not be the sole basis for establishing criteria.

(6) ASSUMPTIONS:

(a) End items will be available for stockage in the quantities required as determined by the study.

(b) Criteria for selection may vary by commodity type.

(c) Criteria for stockage may vary among CONUS and OCONUS commands.

(d) Criteria for stockage will be based on wartime use.

(7) ESSENTIAL ELEMENTS OF ANALYSIS:

(a) Is current Department of the Army guidance for maintenance float policy adequate? If not, what changes are required?

(b) At what level should operational readiness float be stocked in CONUS commands?

(c) At what level should operational readiness float be stocked in OCONUS commands?

(d) Is operational readiness float required for support of USAR and NG units? If yes, at what level?

APPENDIX A (Cont)

(e) Should operational readiness float support for General Support forces be reduced or eliminated? If yes, identify units for reduction or deletion.

(f) What type of data is needed for periodic update of ORF factors, and what is its availability?

6. ADMINISTRATIVE DETAILS

a. Required date. The evaluation will be completed by 30 September 1976.

b. USALEA will use its existing capabilities and resources in accomplishing the evaluation.

c. The Directorate for Supply and Maintenance, ODCSLOG, HQDA, is the proponent for this evaluation. All correspondence between USALEA and the proponent will be routed through Field Services Branch.

d. Direct coordination with all Major Commands, e.g., HQUSAREUR, FORSCOM, AMC, etc, is authorized.

e. USALEA will prepare a study plan to include a milestone schedule within 30 days of date of this directive for approval by the study sponsor.

f. Progress reports will be submitted monthly after approval of the study plan.

g. Final report will be submitted to the study proponent NLT 11 October 1976.

FOR THE DEPUTY CHIEF OF STAFF FOR LOGISTICS:

/s/ R. H. Thompson  
RICHARD H. THOMPSON  
Major General, GS  
Director of Supply  
and Maintenance



APPENDIX A (Cont)

DALO-LEZ-A (29 Jan 76)

SUBJECT: Review Operational Readiness Float Concept (Project LEAP, Issue #153)

THRU DALO-SMM-F

FROM USALEA

DATE 16 Mar 76

CMT 2

Mr Graham/rms/6008

TO DALO-SMZ

1. As requested in paragraph 6e, Comment 1, attached at inclosure 1 is the proposed study plan including milestones for conduct of subject project. The delay in submission of the study plan was mutually agreed to by the Chief, DALO-SMM-F and Mr. J. Graham, LEA during a telephone discussion concerning the project.

2. The status of the project and proposed plan was briefed to MG Thompson on 11 March 1976 during his visit to LEA. At that time, MG Thompson expressed two concerns:

a. The number of man-months of effort required and the total time to do the project.

b. The use of Appendix C, TM 38-750 as a baseline for selecting equipment to be included in the study.

MG Thompson was informed that LEA would take a closer look at both areas.

3. Recommend that the study plan be approved. If necessary, adjustments to time frame or project content can be made during PAG IFR.

1 Incl  
as (6 copies)

signed  
JAMES L. HUDSON  
Colonel, GS  
Commanding

DALO-SMM-F (29 Jan 76)

SUBJECT: Review Operational Readiness Float Concept (Project LEAP, Issue #153)

TO USALEA

FROM DALO-SMZ

DATE 27 Apr 1976

CMT 3

Mr Wilson/ff/55546

Revised project plan, forwarded to HQDA (DALO-SMM-F) informally, 20 April 1976, is approved. Cover page of the revised plan should be amended to indicate the date of revision.

FOR THE DEPUTY CHIEF OF STAFF FOR LOGISTICS:

wd all incl

/S/ R. H. Thompson  
RICHARD H. THOMPSON  
Major General, GS  
Director of Supply  
and Maintenance

APPENDIX A (Cont)

DALO-SMM-F

Review Operational Readiness Float Concept (Project  
LEAP, ISSUE #153)

XXTHRU: DALO-RDZ-A  
TO: CDR, LEA

FROM DALO-SMZ-A

DATE 5 Oct 1976 CMT 1  
Mr. Wilson/wc/55546

1. Reference is made to DF, DALO-SMM-F, 29 Jan 76, SAB.

2. Referenced DF is amended as follows:

a. Paragraph 3. Change to read as follows: PURPOSE: To review operational readiness float policy and validate authorization criteria for Active Army, Reserve and National Guard Units.

b. Paragraph 5a. Add the following references:

(10) USAAA Audit Report NE 76-214, 26 March 1976, "Maintenance Float and Direct Exchange."

(11) Draft GAO Report, 947216-LDC-76-442 (MM-195), 10 Sep 76, "Spare Equipment at Army Maintenance Activities to Maintain Operational Readiness."

c. Paragraph 5d. Change subparagraphs as indicated:

(1) PROBLEM: To review operational readiness float policy and validate or recommend changes to policy to improve the management of operational readiness float support.

(2) OBJECTIVE: To determine -

(a) Effective criteria for the selection of items and units to be provided operational readiness float support.

(b) Procedures for computing valid requirements for operational readiness float.

(3) SCOPE: The project will evaluate (a) current policy and procedures relative to selection criteria for items and units to be provided operational readiness float support and the computation of operational readiness float requirements; (b) GAO and USAAA proposals with respect to these policies and procedures; and develop new or recommended changes in policies and procedures to improve the management of operational readiness float support.

(5) LIMITS:

(b) Fixed communication - electronic equipment operated and maintained by the US Army - Communications Command and the Army Security Agency; Army Aircraft, and Medical Materiel will be excluded from the study.

(7) Essential Elements of Analysis: Change subparagraph (f) and add subparagraphs (g) and (h) as follows:

(f) What type data is needed for the computation and periodic update of valid wartime ORF requirements, and what is its availability? How can availability be improved?

(g) What changes are needed in procedures for computing ORF requirements to insure that these requirements reflect real needs and are not a substitute for good supply and maintenance practices?

(h) What changes are needed in the criteria for the selection of items to be provided ORF support to insure adequate consideration of the impact of such support on equipment readiness?

APPENDIX A (Cont)

DALO-SMM-F

SUBJECT: Review Operational Readiness Float Concept (Project LEAP, ISSUE #153)

d. Paragraph 6a. Change to read: "Required date. The evaluation of GAO proposals (ref para 5a(11)) will be completed by 18 October 1976.

e. Paragraph 6g. Change to read: "Final Draft report will be submitted to the project proponent NLT 1 Nov 76.

/S/ R. H. Thompson  
RICHARD H. THOMPSON  
Major General, CS  
Director of Supply and Maintenance

## APPENDIX B

### ORF STATUS AND UTILIZATION REPORT

B-1. GENERAL. Letter, DRXMD-MS, 24 November 1976, subject: ORF of Army Equipment, recommended that the ORF Status and Utilization Report (fig B-1) be prepared annually by each MACOM. It is basically the form now used by FORSCOM but has been changed to reflect other commands' requirements. Costing data has been eliminated as unnecessary to fulfill ORF management requirements at the major command level. NICP personnel can retrieve cost data from files when desired.

#### B-2. INSTRUCTIONS FOR PREPARATION OF ORF STATUS AND UTILIZATION REPORT.

- a. LINE column - Enter number of the transaction; e.g., enter a "3" if it is the third LIN on the sheet.
- b. Column a - Enter LIN and NSN for each item in ORF or authorized as ORF.
- c. Column b - Enter nomenclature and model; e.g., tank, M60A1, in accordance with SB 700-20.
- d. Column c - Enter total quantity of the item supported by the command/installation; exclude float and war reserve.
- e. Column d - Enter total approved ORF based on last report.
- f. Column e - Enter ORF factor computed from SB 710-1-1 or AR 750-1 information. Use of AR 750-1, appendix L, for computations of ORF factor will be indicated by an asterisk.
- g. Column f - Enter total quantity of the item that is in ORF reserve.
- h. Column g - Enter total demands for the float item for the reporting 12-month period. In computing demands, all items qualifying for float exchange in accordance with paragraph 7-9, AR 750-1, will be counted as demands.
- i. Column h - Enter total number of times ORF stock was issued for the 12-month report period.
- j. Column i - Enter the percentage of demands that were filled from authorized ORF ( $\text{col h} \div \text{col g} \times 100$ ).
- k. Column j - Enter average monthly demands ( $\text{col g} \div 12$ ).
- l. Column k - Enter average turnaround time in months (total time beginning with receipt of unserviceable item and ending with return to ORF stock). Figures in this column should be submitted in months or portions thereof.
- m. Column l - Enter quantity needed in ORF based upon demands and average turnaround time ( $\text{col j} \times \text{col k}$ ).
- n. Column m - Enter excess items (equal to col d minus col l).
- o. Column n - Enter appropriate remarks such as requisition number for ORF shortages, actual number of months item was in the float, etc. Entries in remarks column will be keyed to applicable line entries above.

## APPENDIX B (Cont)

[illegible]

Figure B-1



## APPENDIX C

### REFERENCES

#### DEPARTMENT OF DEFENSE DIRECTIVES AND INSTRUCTIONS (DODI)

DODI 4000.19, Basic Policies and Principles for Interservice, Interdepartmental, and Interagency Support, 27 November 1972.

DODI 4140.42, Determination of Initial Requirements for Secondary Item Spare and Repair Parts, 7 August 1974.

#### ARMY CHIEF OF STAFF MEMORANDUM

CSM 75-5-73, Resources for a 16 Division Active Army (Project 16-78), 13 August 1974 (S).

#### ARMY REGULATIONS

AR 1-1, Planning, Programming, and Budgeting Within the DA, 25 May 1976.

AR 1-35, Administration, Basic Policies, and Principles for Interservice, Interdepartmental, and Interagency Support, 29 June 1973.

AR 5-5, The Army Study System, 26 June 1974.

AR 5-8, Host-Supported Activity Relationship (Interservice), 15 January 1974.

AR 5-9, Management, Intraservice Support, Installation Area Coordination, 1 October 1975.

AR 11-11, Army Programs, Major Command Stockage Levels Worldwide (U), 18 May 1975.

AR 71-3, Force Development User Testing, 17 March 1975.

AR 130-400, Army National Guard, Logistical Policies for Support, 9 December 1971.

AR 140-15, Army Reserve, Maintenance of Equipment, 3 February 1973.

AR 220-1, Unit Readiness Reporting, 17 March 1975.

AR 700-120, Materiel Distribution Management, 14 March 1974.

AR 710-2, Materiel Management for Using Units, Support Units, and Installations, 1 August 1971.

AR 710-3, Asset and Transaction Reporting System, 18 September 1972.

AR 710-60, Standard Study Number System and Replacement Factors, 1 March 1973.

AR 750-1, Army Materiel Maintenance, Concepts, and Policies, 1 May 1972.

AR 750-4, Maintenance of Supplies and Equipment, 2 June 1976.

AR 750-7, Maintenance of Supplies and Equipment, Installation Support Maintenance Activities, 27 May 1976.

AR 750-37, Sample Data Collection, The Army Maintenance Management System (TAMMS), 24 March 1971.

AR 750-52, Equipment Operationally Ready Standards, 20 September 1973.

#### SUPPLEMENTS TO ARMY REGULATIONS

USAREUR Supplement 1 to AR 750-1, Maintenance of Supplies and Equipment, 18 March 1976.

FORSCOM Supplement 1 to AR 750-1, Maintenance of Supplies and Equipment, 2 November 1973.

TRADOC Supplement 1 to AR 750-1, Maintenance of Supplies and Equipment, 20 November 1974.

#### DA MESSAGE

DAMO-RQD, 231845Z Apr 76, subject: FY 78 POM Aircraft IIQs/AAOs and ORF, RCF, PTRF Rates.

DALO-SMM-F, 311500Z Jul 76, subject: Materiel Maintenance Performance Measures.

#### DA DEPUTY CHIEF OF STAFF FOR RESEARCH, DEVELOPMENT, AND ACQUISITION

Procurement, Planning, and Policy Guidance, 1 December 1975.

#### IG - AAA AUDIT REPORTS

IGAA-SOD, 14 November 1974, subject: Audit of Maintenance Float, US Army Missile Command, Audit Report SO 75-19.

AAA Audit Report SO 75-26, 9 January 1975, subject: ORF, US Army Infantry Center, Fort Benning, GA.

AAA Audit Report MW 75-51, 21 March 1975, subject: ORF Equipment III Corps and Fort Hood, TX.

AAA Audit Report NE 75-54, 28 April 1975, subject: Commodity Command Functional Audit, Maintenance Float and Direct Exchange, US Army Tank Automotive Command, Warren, MI.

AAA Audit Report NE 75-68, 30 June 1975, Maintenance Float, US Army Electronics Command, Fort Monmouth, NJ.

AAA Audit Report NE 76-214, 26 March 1976, subject: Maintenance Float and Direct Exchange.

#### USGAO REPORTS

USGAO Draft Report 947216-LCD-76-442 (MM-195), 10 September 1976, subject: Improvements Needed in Computing the Requirements for Spare Equipment at Army Maintenance Activities to Maintain Operational Readiness.

USGAO Report, LCD-76-442, 5 April 1977, subject: Better Management of Spare Equipment Will Improve Maintenance Productivity and Save the Army Millions.

#### STUDIES, EVALUATIONS AND TASKING DIRECTIVES

USAMMC Study, April 1976, subject: A Study to Determine the Cost Impact of Maintenance Floats.

USAOC&S Study, December 1975, subject: Maintenance Standards Study.

USAM&MC&S, April 1976, subject: Missile and Munitions Evaluation (MAME-74/75) Final Report.

Letter, DRCMM-MS, 28 Jun 1976, subject: ORF of Army Equipment.

Letter, DRCMM-M, 3 September 1976, subject: ORF of Army Equipment.

Letter, DRXMD-MS, 20 September 1976, subject: ORF of Army Equipment.

Letter, DRXMD-MS, 24 November 1976, subject: ORF of Army Equipment.

#### MILITARY SPECIFICATIONS

MIL-M-63000C(TM), Amendment 1, 1 September 1971, subject: Technical Manuals: General Requirements for Manuscripts.

#### US ARMY FIELD MANUALS

FM 29-25 Direct Exchange, Shop Supply, and Operational Readiness Float Procedures, March 1972.

#### US ARMY TECHNICAL MANUALS

TM 38-750, The Army Maintenance Management System (TAMMS), 21 November 1972.

#### DEPARTMENT OF THE ARMY SUPPLY BULLETINS

SB 710-1-1, Standard Study No. (SSN) Master File Cross Reference Index, April 1976.

SB 700-20, Army Adopted/Other Item Selected for Authorization/List of Reportable Items, January 1976.

#### ARMY NATIONAL GUARD REGULATIONS AND PUBLICATIONS

NGR 350-1, Army National Guard, Training, 31 October 1975.

NGR 750-1, Army National Guard, Maintenance of Supplies and Equipment, 1 July 1969.

HEADQUARTERS US ARMY MATERIEL DEVELOPMENT AND READINESS COMMAND

Draft DARCOM Regulation 702- , Product Assurance, Red Team/System Assessment Program, 1 June 1976.

US ARMY AVIATION SYSTEMS COMMAND - FLAT RATE MANUALS

<u>Helicopter</u>	<u>Publication</u>	<u>Date</u>
AH-1G	Volumes 1 and 2	July 1973
	Final Report for Period	
	1 July 1970 - 1 July 1974	September 1976
	Volume 1	July 1973
	Final Report for Period	
	1 January 1970 - 31 December 1973	March 1976
CH-47A	Volumes 1 and 2	December 1974
UH-1H	Volumes 1 and 2	July 1975

AMC PAMPHLETS (AMCP)

AMCP 750-6, Maintenance of Supplies and Equipment, Techniques for Determining Optimal Operational Readiness Float, June 1971.

AMCP 750-7, Techniques for Determining Repair Cycle Float, June 1971.

JOINT CHIEF OF STAFF PUBLICATIONS

JCS Pub 6, Volume II, Part 2, Chapter 1, Joint Reporting Structure, Force Status, and Identity Report (FORSTAT).

## GLOSSARY

General Support Forces. Units having Force Stratum Codes Y1, Y3, Z1 and Z3 in the Structure and Composition System (SACS) Force listing used to prepare the Army Materiel Plan (AMP).

Maintenance Float. A quantity of selected end items or major components of equipment authorized for replacement of like items evacuated from using activities for scheduled depot maintenance or the performance of other maintenance operations which cannot be accomplished in a timely manner. There are two types of maintenance float authorized--operational readiness float (ORF) and repair cycle float (RCF).

Operational Readiness Float (ORF). A quantity of selected end items or major components of equipment authorized for stockage at CONUS installations and overseas support maintenance activities to extend their capability to respond to the materiel readiness requirements of supported activities. This is accomplished by providing supported activities with serviceable replacements from ORF assets when like items of equipment of supported activities cannot be repaired or modified in time to meet operational requirements.

Repair Cycle Float (RCF). An additional quantity of selected end items or major components of equipment approved for stockage in the wholesale supply system to replace like items of equipment withdrawn from using activities for scheduled depot maintenance or, in the case of aircraft, the depot maintenance of crash-damaged equipment. This float is used primarily to extend the economic service life of selected items of Army materiel by providing for their depot maintenance on a timely basis without detracting from the materiel readiness of using activities. (As stated in proposed revision of AR 750-1.)

Maintenance Significant Equipment. An end item, assemblage, component, or system proposed or intended for issue to the Army in the field, the maintenance support concept which envisions the performance of corrective maintenance services on a recurring basis.

Mission-Essential Materiel. Materiel authorized and assigned to approved combat and combat support forces which would be immediately employed to destroy the enemy or his capacity to continue war; provide battlefield protection of personnel; communicate under war conditions; detect, locate, or maintain surveillance over the enemy; and permit contiguous combat transportation and support of men and materiel. Equipment assigned to training missions that is of the same type and configuration as that assigned to combat and combat support forces and designated to be immediately employed for the purposes enumerated above is also mission-essential materiel.